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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,466	08/13/2001	Ji Won Kim	K-0307	6144

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FLESHNER & KIM, LLP
P.O. BOX 221200
CHANTILLY, VA 20153

EXAMINER

PRICE, CARL D

ART UNIT PAPER NUMBER

3749

DATE MAILED: 01/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,466

Applicant(s)

KIM ET AL.

Examiner

CARL D. PRICE

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10-23-2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election

Applicant's election with traverse of Specie I (claim 1) in Paper No. 7 is acknowledged. The traversal is on the ground(s) that "the inventions are sufficiently related that a thorough search for the subject matter of each of the designated inventions would encompass a search for the subject matter of the remaining designated inventions.". This is not found persuasive because, contrary to applicant's assertion, any search for each of the various distinct inventions and any considerations related to arriving at determining patentability for each distinct specie will be different for any search and considerations related to determining patentability of each of the other distinct inventions.

The requirement is still deemed proper and is therefore made FINAL.

Claims 2 and 3 are withdrawn

Claims 2 and 3 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected specie, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No.7.

Drawings

Figure 1, 2, 3A. 3B should be designated by a legend such as - - **Prior Art** - - because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1: rejected under 35 U.S.C. 112, second paragraph

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are vague and indefinite. For example, it is unclear since the terms "(Revolutions Per Minute)" and "(Pulse Width Modulation)" are set off from the claim by the use of parentheses. Parentheses are usually applied in claims to enclosed reference numerals so as to avoid confusion with other numbers or characters that may appear in the claims. The use of reference characters is to be considered as having no effect on the scope of the claims. The claim is vague in that it is not clear to what extent applicant intended these phrases to add meaning to the

claimed subject matter. Additionally, the use of the terms "RPM" and "PWM" along with the terms enclosed in parentheses causes confusion since it is unclear which of these terms applicant intends to positively limit the claimed subject matter. It is recommended applicant merely use the more descriptive terms, i.e.- "Revolutions Per Minute", rather than the abbreviation, i.e. - "RPM", to describe the invention. In addition, claim 1, the phrase detecting data of variation in calorific value according to variation in RPM count value, and data of variation in air quantity according to variation in fan motor RPM" is confusing and vague, therefore it is unclear what aspect of the claimed method the detected data of variation in "calorific value" refers. Does the "calorific value" refer to the overall operating requirements of a system operating according to the method? Is "calorific value" intended to refer to the calorific value of, for example, the type of fuel used to perform the method? Does "calorific value" relate to the desired heat output, or requirement (for example, the temperature of room air), of a combustion system operating according to the method? Also, in claim 1, line 10, it is unclear from what aspect of the claimed invention the "A PWM count value" relates. Is this count value related to the previously defined "PWM (Pulse Width Modulation)", line 7?

Allowable Subject Matter

Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Conclusion

See the attached PTO FORM 892 for prior art made of record and not relied upon and which are considered pertinent to applicant's disclosure.

USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is 703-308-1953. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 703-308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1148/0858.



CARL D. PRICE
Primary Examiner
Art Unit 3749